

# (12) UK Patent Application (19) GB (11) 2 358 081 (13) A

(43) Date of A Publication 11.07.2001

(21) Application No 0000376.4

(22) Date of Filing 07.01.2000

(71) Applicant(s)

Seiko Epson Corporation  
(Incorporated in Japan)  
4-1 Nishishinjuku, 2-chome, Shinjuku-ku,  
Tokyo 163-0811, Japan

(51) INT CL<sup>7</sup>

H01L 29/786 21/336

(52) UK CL (Edition S )

H1K KCAA K1CA K4C14 K4H1A K4H1C K4H3X K9C2  
K9D1 K9N2 K9N3  
U1S S2285

(56) Documents Cited  
EP 0801427 A2

(58) Field of Search

UK CL (Edition R ) H1K KCAA KKB  
INT CL<sup>7</sup> H01L  
ON LINE,W.P.I.,EPODOC,JAPIO

(72) Inventor(s)

Ichio Yudasaka  
Mitsutoshi Miyasaka  
Piero Migliorato

(74) Agent and/or Address for Service

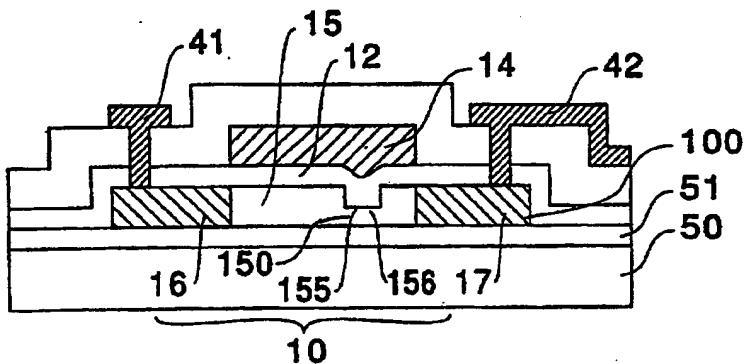
Miller Sturt Kenyon  
9 John Street, LONDON, WC1N 2ES, United Kingdom

(54) Abstract Title

Thin film transistors

(57) The transistor comprises a channel region 15 having a recess 155 such that when a polycrystalline film 100 is annealed, the degree of crystallisation in the region of the recess is reduced, thereby concentrating defects at the recess, which defects act as a recombination centre 150. Instead of a recess, a hump or depression may be formed in the channel region. The recombination centre prevents the bipolar transistor type behaviour of a conventional thin film transistor.

Fig. 1



GB 2 358 081 A